Translation of the pertinent portions of a Notification Regarding the Forwarding of the International Search Report and the Written Decision of the International Search Authority or the Declaration, mailed 02/03/2006 *[this date is followed by a handwritten question mark]*

This International Search Report comprises a total of 12 pages. Copies of the prior art documents cited in this report are also enclosed.

3. **Lack of unity of the invention** (see Field III)

4. Regarding the **Title of the Invention**:

   The wording submitted by the applicant is approved.

5. Regarding the **Abstract**:

   The wording has been established by the Authority in accordance with Rule 38.2b) in the version indicated in Field IV.

6. Regarding the **Drawings**:

   a. Fig. 1 is to be published with the abstract, as selected by the Authority, since the applicant did not propose a drawing.

Field III Remarks in the Case of a Lack of Unity of the Invention (continuation of Item 3 on Page 1)

The International Search Authority has determined that this international application contains multiple inventions:

See attached text

3. Because the applicant has remitted only some of the required additional search fees in a timely manner, this international search report covers only those claims for which fees have been remitted, namely claims:

   1, 2, 4, 6, 7, 9, 92-94, 98, 118-125, 127, 128, 131, 134-136, 138, 142-145, 156, 157

[The following is the list of groups of inventions translated in WO 2005/092613 A3, followed by a page containing the abstract as included in the international application, with reference symbols indicating components of the printing machine of the invention inserted]]

WRITTEN NOTIFICATION OF THE INTERNATIONAL SEARCH AUTHORITY (Rule 43*bis*.1 PCT)

1. This notification contains information regarding the following items:

Field I Basis of the Notification

Field III No expert opinion regarding novelty, inventive step and industrial applicability prepared

Field IV Lack of Unity of the Invention

Field V Substantiated Determination under Rule 43bis.1(a)(i) regarding novelty, inventive step and industrial applicability; documents and explanations to support this determination

Field I Basis of the Notification

[*No entries marked in this section*]

Field III No Expert Opinion Regarding Novelty, Inventive Step and Industrial Applicability Prepared

The following portions of the invention were not examined with respect to whether the claimed invention should be viewed as novel, based upon an inventive step (not obvious) and industrially applicable:

Claims 3-5, 8, 10-91, 95-97, 99-117, 126, 129, 130, 132, 133, 137, 139, 140, 141, 146-155, 158-171

Reason:

No International Search Report was prepared for the entire application or for the above-listed claims 3-5, 8, 10-91, 95-97, 99-117, 126, 129, 130, 132, 133, 137, 139, 140, 141, 146-155, 158-171.

Field IV Lack of Unity of the Invention

2. In response to the request for payment of additional fees (Form PCT/ISA/206) the applicant:

   has remitted no additional fees.

3. The Authority has determined that the requirement regarding unity of the invention according to Rules 13.1, 13.2 and 13.3

   has not been fulfilled for the following reasons:

   See attached sheet

4. Thus the notification is issued for the following portions of the international application:

   Those portions that relate to the claims having the following numbers:
   1, 2, 4, 6, 7, 9, 92-94, 98, 118-125, 127, 128, 131, 134-136, 138, 142-145, 156, 157

Field V Substantiated Determination under Rule 43bis.1(a)(I) Regarding Novelty, Inventive Step and Industrial Applicability; Documents and Explanations to Support this Determination

1. Determination

Novelty	Yes: Claims	6, 7, 138, 142-145, 156, 157
	No: Claims	1, 2, 4, 9, 92-94, 98, 118-125, 127, 128, 131, 134-136
Inventive Step	Yes: Claims	
	No: Claims	1, 2, 4, 6,

			7, 9, 92- 94, 98, 118-125, 127, 128, 131, 134-136, 138, 142-145, 156, 157
Industrial Applicability	Yes:	Claims	1, 2, 4, 6, 7, 9, 92- 94, 98, 118-125, 127, 128, 131, 134-136, 138, 142-145, 156, 157
	No:	Claims:	

2. Documents and Explanations
See attached text

WRITTEN NOTIFICATION OF THE INTERNATIONAL SEARCH AUTHORITY (SUPPLEMENTARY SHEET)

Re: Item III.

Due to a problem with unity, an incomplete search was performed. Since the concept of claims 1, 2, 7, 92-94 differs in principle from the concepts of claims 1, 3-6, 8-91, 95-171 (for the basis for this see Item IV), the dependent claims 3-6, 8-91, 95-171 were not searched.

Re: Item IV.

[The following is copied from Prosecution A]

1 The single general idea (same or related characterizing features) among the independent claims 1-5 is ***a priori*** a printing machine having at least one machine element that can be adjusted with a correcting element, having a detection device, and having a control device. However this general idea is not novel (see below). Therefore **no single, general, novel idea exists** among the independent claims 1-5.

2 The present invention does not fulfill the requirements of Article 33(1) of the PCT, since the object of claim 1 is not novel as defined by Article 33(2) of the PCT.

1.1 The document D1-US5546861 discloses (references in parentheses refer to this document):
A printing machine having at least one machine element (28) that can be adjusted with a correcting element (implicit), wherein an adjustment of the at least one machine element (28) affects a quality of a printing performed by the printing machine, wherein an optical detection device (20) having a sensor directed toward a surface of a printing substrate printed on in the printing machine detects the quality of the printing during the transport of the printing substrate through the printing machine, and wherein a control device (26) that receives data from the optical detection device (20) uses the correcting element (implicit) to adjust the at least one machine element (28) based upon a difference between a quality of the printing (column 3, lines 5-10), predetermined as the target value, and the quality of the printing detected as the actual value by the optical detection device (20), in a manner that serves to minimize the difference between the target value and the actual value, **wherein** the at least one machine element (28) is a temperature-control device (28) for controlling the temperature of at least part of a circumferential surface of a rotational body of the printing machine (abstract), wherein the rotational body is involved in the transport of a printing ink onto the printing substrate that is printed on with the ink in the printing machine (implicit).

2.2 Thus the preamble to claims 1-5 is not novel (Article 33(1), (2) PCT) and no single common, novel idea exists among the independent claims 1-5.

3 The different inventions/groups of inventions thus are, **a posteriori**:

[Here, the list of groups of inventions already translated in WO2005/092613 A3 is repeated.]

The problems to be solved here are:
1 - to improve the precision of the angled register.
2 - to be able to adjust the tack value.
3 - to improve the interrelation/interaction between the control device, the detection device, the correcting element and the machine element.
4 - to more precisely meter the quantity of ink.
5 - to improve the temperature-control device.

6 - to improve the overall properties/characterizing features (printing couples, drive for the cylinders...) of the printing machine.
7 - to improve the properties/characterizing features of the detection device.
8 - to improve the properties/characterizing features of the sensors.
9 - to better illuminate the printing substrate.
10 - to improve the properties/characterizing features of the correcting element.
11 - to compensate for fan-out effect.
12 - to better process the target value for quality.
13 - to improve the properties of the control device.
14 - to better control a folding unit.
15 - to cut or perforate the printing substrate with a higher degree of precision.
16 - to better control or regulate the ribbon register.
17 - to change the web length of partial webs.
18 - to better characterize the printing substrate.
19 - to improve the positioning of the detection device in the printing machine.
20 - to improve the servo drive for implementing the radial lift of a roller or a cylinder.

The problems of the twenty inventions/groups of inventions differ from one another, hence a lack of unity exists.

Because the special technical characterizing features are not connected (Rule 13.1 and 13.2 PCT), the different inventions also are not connected. Furthermore, the present invention is not unified.

The application relates to a multitude of inventions or groups of inventions as defined by Rule 13.1 PCT. These have been subdivided as described above. If the applicant pays the additional fees for one (or more) as yet unsearched group(s) of inventions, the additional search(es) could uncover a further prior art that could establish a further lack of unity *'a posteriori'* within a (or several of the) as yet unsearched group(s). In that case only the first invention within (each of) this (these) group(s) of inventions, for which a lack of unity of the inventions has been established, will become the object of a search. No further request for payment of additional fees will be issued. The reason for this is that Article 17(3) PCT establishes that the ISA shall prepare the International Search Report for those portions of the international application that relate to the invention first mentioned in the claims ('main invention') and for the portions that relate to the inventions for which additional fees have been remitted. Neither the PCT agreement nor the PCT guidelines establish legal grounds for further requests for payment of additional search fees (W17/00, Point 11 and W1/97, Items 11-16).

Item V.

Reference is made to the following documents:

D1: US-A-5 546 861 (L+E, UML O+EE FFLER ET AL) 20 August 1996 (08/20/1996)
D2: DE 199 17 773 A1 (PUDIMAT, ROLAND) 4 November 1999 (11/04/1999)
D3: EP-A-0 767 059 (GOSS GRAPHIC SYSTEMS, INC) 9 April 1997 (04/09/1997)
D4: EP-A-1 048 461 (HEIDELBERGER DRUCKMASCHINEN; HEIDELBERGER DRUCKMASHINEN AKTIENGESELLS) 2 November 2000 (11/02/2000)
D5: DE 197 24 171 A1 (FPEIFFER, NIKOLAUS, 69118 HEIDELBERG, DE; PUDIMAT, ROLAND, 69412 EBERB) 16 October 1997 (10/16/1997)
D6: DE 43 02 149 A1 (HEIDELBERGER DRUCKMASCHINEN AG, 69115 HEIDELBERG, DE) 28 July 1994 (07/28/1994)
D7: DE 198 30 490 A1 (HEIDELBERGER DRUCKMASCHINEN AG, 69115 HEIDELBERG, DE) 20 May 1999 (05/20/1999)
D8: DE 44 13 735 A1 (HEIDELBERGER DRUCKMASCHINEN AG, 69115 HEIDELBERG, DE; HEIDELBERGER DRU) 26 October 1995 (10/26/1995)

D9: US-A-4 534 289 (DUERRNAGEL ET AL) 13 August 1985 (08/13/1985)
D10: EP-A-0 722 831 (BAUMUELLER NUERNBERG GMBH; BAUMUELLER ANLAGEN-SYSTEMTECHNIK GMBH CO) 24 July 1996 (07/24/1996)
D11: DE 12 41 464 B (AMERICAN TYPE FOUNDERS CO., INC) 1 June 1967 (06/01/1967)
D12: FR-A-2 391 073 (POLYGRAPH LEIPZIG KOMBINAT POLYG) 15 December 1978 (12/15/1978)
D13: DE 100 13 876 A1 (HEIDELBERGER DRUCKMASCHINEN AG) 12 October 2000 (10/12/2000)
D14: DE 100 30 572 A1 (ARADEX AG) 3 January 2002 (01/03/2002)
D15: GB-A-2 119 505 (BOBST SA) 16 November 1983 (11/16/1983)
D16: US-A-5 500 801 (LOEFFLER ET AL) 19 March 1996 (03/19/1996)
D17: EP-A-1 167 035 (TOKYO KIKAI SEISAKUSHO LTD) 2 January 2002 (01/02/2002)
D18: US-A-5 740 054 (DUERR ET AL) 14 April 1998 (04/14/1998)
D19: US-A-5 452 632 (DUERR ET AL) 26 September 1995 (09/26/1995)
D20: EP-A-0 835 755 (HURLETRON, INCORPORATED) 15 April 1998 (04/15/1998)
D21: US-A-4 847 775 (ROCH ET AL) 11 July 1989 (07/11/1989)
D22: US 2003/010236 A1 (DE VROOME CLEMENS JOHANNES MARIA) 16 January 2003 (01/16/2003)
D23: DE 37 30 625 A1 (MASCHINENFABRIK WIFAG; MASCHINENFABRIK WIFAG, BERN, CH) 23 March 1989 (03/23/1989)
D24: DE 199 10 835 C1 (INNOMESS ELEKTRONIK GMBH) 7 September 2000 (09/07/2000)
D25: US-B1-6-644 184 (HAJEK JOSEF ET AL) 11 November 2003 (11/11/2003)
D26: EP-A-0 649 744 (BALDWIN GRAPHIC SYSTEMS, INC) 26 April 1995 (04/26/1995)

1 INDEPENDENT CLAIM 1

1.1 The present invention does not fulfill the requirements of Article 33(1) of the PCT, since the object of claim 1 is not novel as defined by Article 33(2) PCT.
Document D1 discloses (references in parentheses refer to this document):
A printing machine having at least one machine element (28) that can be adjusted with a correcting element (implicit), wherein an adjustment of the at least one machine element (28) affects a quality of a printing performed by the printing machine, wherein an optical detection device (20) having a sensor directed toward a surface of a printing substrate printed in the printing machine detects the quality of the printing during the transport of the printing substrate through the printing machine, and wherein a control device (26) that receives data from the optical detection device (20) uses the correcting element (implicit) to adjust the at least one machine element (28) based upon a difference between a quality of the printing (column 3, lines 5-10), predetermined as the target value, and the quality of the printing detected as the actual value by the optical detection device (20), in a manner that serves to minimize the difference between the target value and the actual value, **wherein** the at least one machine element (28) is a temperature-control device (28) for controlling the temperature of at least part of a circumferential surface of a rotational body of the printing machine (abstract), wherein the rotational body is involved in the transport of a printing ink to the printing substrate that is printed on with the ink in the printing machine (implicit).

1.2 In consideration of documents D3, D6, the present application also does not fulfill the requirements of Article 33(1) PCT with respect to novelty and/or an inventive step.

2 INDEPENDENT CLAIM 2

2.1 The present invention does not fulfill the requirements of Article 33(1) PCT, since the object of claim 2 is not based upon an inventive step as defined by Article 33(3) PCT.

The document D4 is considered the closest prior art to the object of claim 2. It discloses (references in parentheses refer to this document):
A printing machine having at least one machine element (10, 11) that can be adjusted with a correcting element (10), wherein an adjustment of the at least one machine element (10, 11) affects a quality of a printing performed by the printing machine, wherein an optical detection device (13) having a sensor (13) directed toward a surface (Fig. 1) of a printing substrate printed on in the printing machine detects the quality of the printing during the transport of the printing substrate through the printing machine, and wherein a control device (12) that receives data from the optical detection device (13) uses the correcting element (10) to adjust the at least one machine element (10, 11) based upon a difference between a quality of the printing that is preset as the target value and the quality of the printing detected as the actual value by the optical detection device (paragraph [0013]), in a manner that serves to minimize the difference between the target value and the actual value, **wherein** the correcting element (10) is a servo drive for adjusting a position of a forme cylinder arranged in the printing machine, relative to the printing substrate in an axial circumferential direction.

The object of claim 2 thus differs from the known correcting element in that the correcting element (10) is a servo drive for adjusting an **inclination** of a forme cylinder arranged in the printing machine, relative to the printing substrate.

The object to be attained with the present invention can thus be viewed as compensating for the diagonal register error.

However it is generally known to one of ordinary skill in the art that the characterizing feature "inclination" is equivalent to the characterizing feature "axial position" known from Document D4, and that these can be interchanged as needed.

2.2 In consideration of the documents D2, D6, D7 the present application also does not fulfill the requirements of Article 33(1) PCT with respect to novelty and/or an inventive step.

3 INDEPENDENT CLAIM 4

3.1 The present invention does not fulfill the requirements of Article 33(1) PCT since the object of claim 4 is not novel as defined by Article 33(2) PCT. Document D15 discloses (references in parentheses refer to this document) in Diagram 3:
A printing machine having at least one machine element (41, 43) that can be adjusted with at least one correcting element (40), wherein an adjustment of the at least one machine element (41, 43) affects a quality of a printing performed by the printing machine, wherein an optical detection device (30, 31, 32) having a sensor (30, 31) directed toward a surface of a printing substrate printed in the printing machine detects the quality of the printing during the transport of the printing substrate through the printing machine (page 1, lines 11-21) and wherein a control device (33, 42) that receives data from the optical detection device (30, 31, 32) uses the correcting element (40) to adjust the at least one machine element (41, 43) based upon a difference (page 1, lines 123-125) between a quality of the printing that is preset as the target value (known) and the quality of the printing detected by the optical detection device (30, 31, 32) as the actual value, in a manner that serves to minimize the difference (paragraph [0014]) between the target value and the actual value, **wherein**, when a difference between the target value and the actual value has been identified, the control device (12) determines a change in a spacing between two marks or measurement fields arranged crosswise to the direction of transport of the printing substrate (implicit), which are incongruent in their spacing or at least in their respective positions (known), wherein the optical detection device (30, 31, 32) detects

the two marks or measurement fields, which are both assigned to the same color patch, simultaneously (implicit), wherein the control device (page 1, lines 32-34) uses the correcting element to adjust the at least one machine element (41, 43) based upon the detected change in the spacing.

3.2 In consideration of the documents D1 and D2, D4, D6, D7, D13, D14, D16-D24, the present invention also does not fulfill the requirements of Article 33(1) PCT with respect to novelty and/or an inventive step.

4 DEPENDENT CLAIMS 6, 7, 9, 92-94, 98, 118-125, 127, 128, 131, 134-136, 138, 142-145, 156, 157

4.1 The dependent claims 6, 7, 9, 92-94, 98, 118-125, 127, 128, 131, 134-136, 138, 142-145, 156, 157 appear to contain no additional characterizing features that, in combination with the characterizing features of any claim to which the above-listed claims are referred, could result in an object that is based upon an inventive step. All of these characterizing features are known in the art or are a part of the prior art, and have already been used for the same purpose (see the corresponding citations from the International Search Report). Moreover, these characterizing features relate only to structural embodiments that attain independent objects, without any surprising effects resulting from their combination.

The additional grounds for this are as follows:

- With respect to the characterizing feature "servo drive for adjusting an inclination of a forme cylinder relative to the printing substrate", Document D2 describes the same advantages (an improvement in angular register precision) as the present application does. One of ordinary skill in the art would thus view the incorporation of this characterizing feature into the printing machine described in D1 as a constructive measure for attaining the stated object **[Claims 6, 7]**.
  One of ordinary skill in the art would also, without inventive activity, combine all the characterizing features disclosed in D3 and D4, in order to attain the stated objective.
  The solution proposed in claims 6, 7 thus cannot be viewed as inventive (Article 33 (3) PCT).
- It is generally known to one of ordinary skill in the art to utilize a detection device to identify marks or measurement fields continuously during a printing, in order for a control device to diminish the register error, especially the diagonal/angular register error, by means of a servo drive - **[Claims 9, 92-94, 981118 *[sic]*, 119, 121, 134-136, 138]** - see, for example, D2, D4, D6, D7, D10-D12.

- The characterizing feature "data bus" is already known to one of ordinary skill in the art - **[Claim 120]** - see, for example, D15, page 3, lines 9-11; D21, column 4, lines 33-35; D23, column 6, lines 5-9.

- It is known to one of ordinary skill in the art to use a control device to control/regulate a folding unit/cutting cylinder and the cut-off/ribbon register, based upon a position of a printed image identified by an optical detection device, in order to diminish cut-off/ribbon register error - **[Claims 123-125, 127, 128, 131]** - see, for example, D17, paragraph [0016]; D18, abstract; D19, column 1, lines 34-51; D20.

- The detection of an interference in the production performed with the printing machine, especially a paper web break, is an already known characterizing feature, and its obvious result is a shut-down of production - **[Claims 142-145]**

- The characterizing feature "switch for changing the transport pathway of the printing substrate" is already known - **[Claims 156, 157]** - see, for example, D22, abstract, paragraph [0005].

10 CLARITY

10.1 The present application is not clear (Article 6 PCT), since the number of dependent claims is not logical (see Guidelines PCT 5.15).

The sequence of the patent claims creates a lack of clarity in the definition of the object for which protection is being applied.

All dependent claims that refer back to other patent claims should be combined to the greatest extent possible and in the most expedient manner (Guidelines PCT 5.15, 5.31, 5.32).

10.2 The claims (especially claim 1) are unclear according to Article 6 PCT, since a number of characterizing features of the product claims are formulated as process features (for example **"during the transport** of the printing substrate"...).